

The Afrotropical species of *Apotropina* Hendel (Diptera: Chloropidae)

by

Curtis W. Sabrosky

(Co-operating Scientist, Systematic Entomology Laboratory, IIBIII, Agricultural Research Service, USDA, c/o U.S. National Museum of Natural History, Washington, D.C. 20560)

SYNOPSIS

Only two species of the widely distributed genus *Apotropina*, formerly *Lasiopleura*, have previously been known from tropical Africa. This paper recognises and provides keys to nine species, of which one is left unnamed and six are described as new: *A. brunneivittata* (Natal, South Africa), *A. lachaisei* (Côte d'Ivoire, Zaïre), *A. nigricornis* (Malagasy Republic), *A. sigalopleura* (Mozambique, Nigeria), *A. stuckenbergi* (Malagasy Republic), and *A. tsusikama* (Cape Province, South Africa). New records and notes are given for *A. gregalis* (Lamb) and *A. vittata* (Sabrosky).

INTRODUCTION

The genus *Apotropina* (as *Lasiopleura*) was first recorded from Africa by myself (Sabrosky 1951) in a report on the Chloropidae of the Ruwenzori Expedition of the British Museum (Natural History). A single specimen was studied but left unnamed because of its poor condition, and *Oscinella gregalis* Lamb, 1937, was referred to the genus. Another species, *Lasiopleura vittata* Sabrosky, was added in 1959, and these two named species are all that appeared under *Lasiopleura* in the Afrotropical Catalogue (Sabrosky, 1980*b*). In the same year (Sabrosky 1980*a*) I noted the synonymy of *Lasiopleura* with *Apotropina* in a short paper dealing with the identity of an Australian species originally described as an ephydrid.

The present paper arose from a study of the interesting and species-rich collections of Malagasy Chloropidae kindly sent to me by my friends Brian Stuckenberg of the Natal Museum, Pietermaritzburg, South Africa, the late Fred Keiser of the Naturhistorisches Museum, Basel, Switzerland, and R. Paulian, then of the Institut de Recherche Scientifique de Madagascar, Tananarive. Comparison of the Malagasy species with those from the African continent led to the recognition of a number of new African species and the preparation of this paper independent of one on the Chloropidae of the Malagasy Republic. Material collected by Stuckenberg was obtained during his tenure of a grant from the South African Council for Scientific and Industrial Research, and with the assistance of the Institut at Tananarive.

It is unfortunate that males are not available for some of the species, but they are so well marked that they will be easily recognisable.

Andersson (1977), in his key to subfamilies, credits the subfamily Siphonellopsinae, to which *Apotropina* belongs, with having one sternopleural bristle and the lateral scutellar bristles closer to the anterior margin of the scutellum than to apical scutellars. However, in the Afrotropical species, several lack any trace of a sternopleural bristle, and the lateral scutellars are close to the bases of the apical scutellars. In other species, each lateral scutellar is midway between the apical scutellar and the base of the scutellum, i.e., the anterior margin. These characteristics must be added to the 'wide range of character states' noted by Andersson for 'many characters in Siphonellopsinae'.

I may also note that these species will not key out satisfactorily in Andersson's key to the genera of this subfamily because of different combinations of characters used. This would not necessarily mean that the genera there recognised were invalid, but I am still of the opinion, expressed in Sabrosky (1980a), that there are fewer rather than more genera, with a wide range of character states, in this widely distributed group.

Genus *Apotropina* Hendel

Ectropa Schiner, 1868: 242 (preoccupied by *Ectropa* Wallengren, 1863). Type species, *E. viduata* Schiner (original designation).

Apotropina Hendel, 1907: 98. (New name for *Ectropa* Schiner, preoccupied.)

Lasiopleura Becker, 1910: 130. Type species, *Oscinis longepilosa* Strobl (monotypy). (Synonymy by Sabrosky, 1980a.)

The species of *Apotropina* share many characteristics, though some may differ among the species in proportions or degree of development. To obviate repetition in the following descriptions, the following occur in all the species treated here:

Head: Viewed from above wider than long and slightly wider than thorax; frons broad, wider than an eye and over half the width of head (0,56x–0,68x), narrowing towards anterior margin, sometimes decidedly so, anterior margin even with eyes, not projecting; frontal triangle conspicuous, broad at base, of characteristically different lengths in different species. Head in profile higher than long, but often appearing subquadrate in outline, though vibrissal 'angle' is rounded, not angulate; eye minutely sparsely haired, appearing bare, large and bulging, longer than broad with long axis more or less diagonal, in extreme cases almost parallel to frons, ommatidia enlarged towards face. Face narrow, corresponding in width to the anteriorly narrowed frons; parafacial usually linear and not visible in profile. Chaetotaxy: head bristles vary in degree of development (length and strength), but inner vertical, ocellar, postocellar, and 3 fronto-orbital bristles and vibrissae regularly present, outer vertical often present but absent in some species; uppermost two fronto-orbitals lateroocline, directed over eye, but foremost and weaker fronto-orbital usually more or less procline; anterior pair of interfrontal setae, flanking or anterior to apex of triangle, often more developed than other frontal or interfrontal hairs and cruciate at tips.

Thorax: Mesoscutum slightly longer than broad, convex, tomentose (pollinose), hairs in regular rows in acrostical, dorsocentral, and intra-alar positions, but few other hairs; humeral calli large and well marked; scutellum short, broader than long, broadly rounded apically. Chaetotaxy: 2 humeral (1 mesocline, 1 reclinate), apparently 2 notopleural but posterior varies in position, 1 postalar, 1 to

several dorsocentrals, 1 apical and 1 subapical scutellar pairs of bristles, the subapical scutellars often short and weak.

Male genitalia: Epandrium usually large and knob-like, conspicuous.

Legs: Without unusual developments, slender, hind femur longer than fore femur, but seldom very elongate.

Wing: Venation normal for the genus, but with different proportions of veins and cells useful in species descriptions; all veins strong, costa especially so, ending at 4th vein (M) just beyond apex of wing; distinct flexure in 5th vein along back of discal cell, sometimes especially strong with a stub vein projecting into discal cell.

Different degrees of development of various characters have made it difficult to group species satisfactorily. In the keys I have relied on the most obvious characters least likely to be misinterpreted or to be broken or spoiled by the condition of available specimens. Two groups of obviously closely related species can be identified (as follows) but *gregalis*, *vittata* and an unnamed species are intermediate and not readily placed.

A. brunneivittata, *nigricornis*, *stuckenbergi*: one pair of dorsocentral bristles; dull, densely tomentose frontal triangle; strong flexure in 5th vein along back of discal cell; anal area of wing broadened, anal 'angle' nearly a right angle, though rounded; 2nd vein (R_{2+3}) gently sigmoid, 2nd costal sector (between tips of 2nd and 3rd veins) obviously much longer than 3rd sector (1,65x–2,05x).

A. lachaisei, *sigalopleura*, *tsitsikama*: Three to four pairs of dorsocentral bristles; highly shining frontal triangle, either polished or sparsely tomentose; weak flexure of 5th vein (moderate in *tsitsikama*); anal area not broadened, anal 'angle' obtusely rounded, arcuate; 2nd vein concave anteriorly, 2nd costal sector less than or only slightly longer than 3rd sector (0,92x–1,28x).

Key to Afrotropical species of *Apotropina*

- 1 Gena at narrowest obviously wider (1,3x) than breadth of 3rd antennal segment and 0,6 times the height of an eye (Fig. 1); entire thorax bright grey tomentose with conspicuous dark brown stripe across lower half of humeral callus and upper fifth of pleuron (Natal) **brunneivittata** sp. n.
- Gena narrower, at narrowest obviously not greater than breadth of 3rd antennal segment and 0,08–0,29 times the height of an eye (cf. Figs 2–3); thorax not as above, without a lateral brown stripe 2
- 2 One pair of dorsocentral bristles, the posterior or prescutellar pair; no presutural intra-alar bristles, or at most short and scarcely distinguishable from hairs 3
- Three or four pairs of dorsocentral bristles, and a pair of distinct presutural intra-alars 7
- 3 Frontal triangle entirely or chiefly polished black, with tomentum on ocellar tubercle and sometimes in apex of triangle 4
- Frontal triangle densely grey tomentose, occasionally thinly so 5
- 4 Gena at narrowest only $\frac{2}{3}$ breadth of 3rd antennal segment and 0,16–0,20 times the height of an eye, with 1 row of pale, whitish yellow hairs (Fig. 2); vibrissa also whitish yellow; mid and hind femora not appreciably longer than fore femur (Namibia, Nigeria, Sudan) **gregalis** (Lamb)

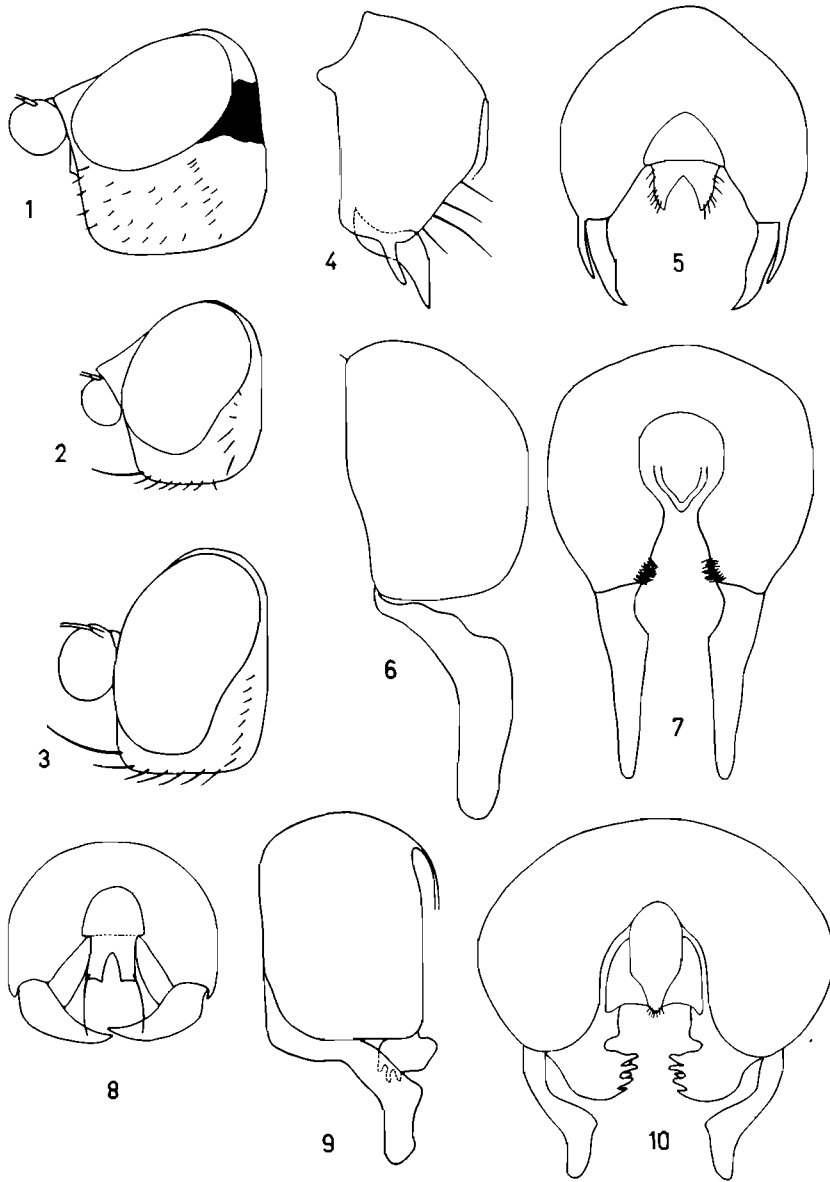
- Gena at narrowest approximately as broad as 3rd antennal segment and 0,27 times the height of an eye, with 2 irregular rows of brownish hairs; vibrissa black; mid and hind legs slender and elongate, each femur obviously much longer than fore femur (Zimbabwe) **Apotropina** sp. unnamed
- 5 Pleuron entirely dull, grey tomentose 6
- Pleuron brownish grey tomentose with conspicuous polished spots on meso- and sternopleuron and below and behind anterior thoracic spiracle (South Africa, Zimbabwe, Zaïre, Malagasy Republic) **vittata** (Sabrosky)
- 6 Antenna entirely black, or almost so; mesonotum dark brown except for grey notopleural areas (Malagasy Republic) **nigricornis** sp. n.
- Antenna predominantly orange, infuscated about base of arista and on part of outer surface; mesonotum grey with faintly brownish narrow stripes (Malagasy Republic) **stuckenbergi** sp. n.
- 7 Frontal triangle shining but finely and sparsely tomentose; meso- and pteropleuron tomentose except for anteroventral spot on mesopleuron 8
- Frontal triangle polished black except for small brownish tomentose ocellar tubercle; meso- and pteropleuron polished except for narrow dorsal band (Mozambique, Nigeria) **sigalopleura** sp. n.
- 8 Frontal triangle, long, apex nearly at anterior margin of frons; lateral scutellar bristles weak, short and slender (Côte d'Ivoire, Zaïre) **lachaisei** sp. n.
- Frontal triangle shorter, only $\frac{2}{3}$ length of frons, apex well short of anterior margin of frons; lateral scutellar bristles long and strong, approximately same as posterior dorsocentral bristles (Cape Province). **tsitsikama** sp. n.

***Apotropina brunneivittata* sp. n.**

Densely grey tomentose species with broad gena and a narrow, dark brown stripe on each side from eye to apex of abdomen, across upper fifth of pleuron.

Female. Densely grey tomentose, the frontal triangle yellowish grey, gena silvery grey, and disk of mesoscutum slightly darker than sides and pleuron, with a faint suggestion of narrow brownish stripes in dorsocentral and intra-alar positions, on each side a conspicuous, narrow, dark brown stripe from eye to apex of abdomen, that on occiput behind eye adjoining thoracic stripe that extends across lower half of humeral callus and upper third of meso- and pteropleuron and adjoining in turn a polished black stripe on the side of the abdomen, nearly to apex of fifth tergum. Anterior $\frac{2}{3}$ of frons, most of 3rd antennal segment (narrowly infuscated dorsally), arista, palpus, and basal tarsomere or two of mid and hind legs yellowish to orange-yellow; knob of halter whitish yellow; hairs of gena, meso- and sternopleuron, abdominal sterna, all coxae, and ventral surface of fore femur whitish yellow, other hairs and bristles black.

Head: Frons especially broad, at vertex 3 times width of an eye and $\frac{2}{3}$ width of head; frontal triangle with acute apex at nearly 0,6 times length of frons. In profile, eye 1,5 times as long as broad, long axis paralleling slope of frons; gena broad, about 0,6 times greatest breadth of eye and 1,3 times the breadth of 3rd antennal segment, with 2 or 3 irregular rows of short pale hairs (Fig. 1); face with thin, partition-like carina that ends ventrally in a short but acute projection visible



Figs 1-10. *Apotropina* species. 1-3. Lateral aspect of head. 1. *A. brunneivittata* sp. n. 2. *A. gregalis* (Lamb). 3. *A. lachaisei* sp. n. 4-10. Lateral and posterior aspects of male genitalia. 4-5. *A. vittata* (Sabrosky). 6-7. *A. nigricornis* sp. n. 8. *A. lachaisei* sp. n. 9-10. *A. stuckenbergi* sp. n.

in profile, below which is a long epistomal area. Cephalic bristles short, the 3 proclinate fronto-orbital bristles on each side barely longer than frontal hairs; no outer vertical bristles. Third antennal segment moderately large, 1,23 times as broad as long; arista micro-pubescent.

Thorax: Mesoscutum narrowed anteriorly to less than width of head, broadest opposite wing bases; thoracic bristles short but distinct, one posterior dorsocentral bristle; scutellum with widely separated apical scutellar bristles and outside of each an extremely short and weak hair-like lateral scutellar, less than half the length of several bristly discal hairs; meso- and sternopleuron each with numerous hairs; no sternopleural bristle.

Abdomen: Sparsely haired; 2nd tergum slightly longer than any of the others.

Legs: Hind tibia without a tibial organ posterodorsally, but with a strong black bristle anteroventrally, about $\frac{2}{3}$ diameter of tibia.

Wing: Second vein gently sigmoid, length of 2nd to 4th costal sectors as 33 : 20 : 7; 1st posterior cell widening beyond hind crossvein, then narrowing toward apex of wing; discal cell long, much wider distally, distance between crossveins obviously much greater than between hind crossvein and wing margin (1,8x); fore crossvein only slightly beyond middle of discal cell (0,525); 5th vein along back of discal cell with unusually strong flexure; a few black setae on upper side of radial vein, at and just before branching of radial sector, and a few more setae on distal portion of 1st vein, also erect black hairs on 3rd vein, well spaced, extending well out on wing; anal area of wing well developed.

Length of body: 4 mm; of wing, 3,75 mm.

Holotype: SOUTH AFRICA: *Natal*: ♀, Gillitts, Pinetown district, Dec. 28, 1961 (B. & P. Stuckenberg). Natal Museum (NM-2550)

The name, an adjective, refers to the dark brown stripe on each side.

Apotropina gregalis (Lamb) **comb. n.**

Oscinella gregalis Lamb, 1937: 430 (Namibia).

Lasiopleura gregalis (Lamb) Sabrosky, 1951: 764.

The species was described from specimens from Okahandja, 'S. W. Africa', 'stated to occur as a swarm on a verandah, and appears in the same way each year in spite of repeated distraction'. Some years ago I received from the late Harold Oldroyd a series from Kano, northern Nigeria, August 1952 (W. E. Kershaw) taken in and around a chimney in a European house. Now further evidence of aggregation by this species is shown by 'dense aggregations' found on Bushman rock paintings in a cave in the Brandberg range of Namibia by Harold Pager, and relayed to me by Brian Stuckenberg. In the last case the flies may have been attracted to the paintings by their lighter colour compared to the rock walls. I also have before me 18 specimens on 3 mounts, from El Fasher, Sudan, 'Jan. 1940?', labelled simply 'houses', that may well have been collected from an aggregation. A series of 10 specimens on one mount, Zaria, Samaru, northern Nigeria, March 21, 1972 (J. C. Deeming) may also have come from an aggregation, which seems to be characteristic of this species. From the material presently available to me, it appears that females are much more common than males in these aggregations.

The male genitalia are approximately as figured for *A. vittata* (cf. Figs 4–5). The epandrium has well-developed ventral corni, the surstyli are tapering and acute at apex, and the short cerci are fused at base. The hypandrium is small, and the arms are fused dorsally.

***Apotropina lachaisei* sp. n.**

Black, with shining but thinly tomentose frontal triangle and narrow gena.

Male, female. Predominantly black; narrow anterior margin of frons, antenna except narrow dorsal margin of 3rd segment, and palpus fulvous; face and gena yellow, whitish tomentose; legs chiefly yellow, including all coxae, trochanters, femora except distal third, ends of mid and hind tibiae, and proximal tarsomeres of mid and hind tarsi; veins brown, membrane lightly browned.

Head: Frontal triangle shining but thinly tomentose; apex almost at anterior margin of frons. In profile, frons strongly sloping, convex; eye large and occupying most of head, its long axis slightly diagonal; gena narrow, $\frac{1}{4}$ breadth of 3rd antennal segment and 0,09 times the height of an eye, with a row of 6 fine black hairs along lower margin (Fig. 3). Third antennal segment reniform, 1,5 times broader than long; arista short-haired, base slightly enlarged. Cephalic bristles well developed, but anterior proclinate fronto-orbital weak and hair-like; foremost pair of interfrontals strong.

Thorax: Mesonotum shining but thinly tomentose, as are upper half and posterior slope of pleuron, the pro- and sternopleuron and anteroventral margin of mesopleuron polished. Bristles well developed; 2 strong pairs of dorsocentral bristles and two pairs of weak ones anterior to them; presutural intra-alar on each side moderately long. Scutellum with long apicals well separated at base, and midway on each side a short and weak lateral, but no discal hairs; mesopleuron bare of hairs; a weak sternopleural bristle, almost hair-like.

Abdomen: Subshining, thinly tomentose, long-haired.

Legs: Hind tibia posterodorsally with elongate oval, almost linear tibial organ, but without spur anteroventrally, only a short black bristle half diameter of tibia.

Wing: Second vein gently concave anteriorly, 2nd to 4th costal sectors as 18:14:16; 3rd vein slightly concave anteriorly and 4th vein almost straight, so the two diverge slightly at margin of wing; discal cell short, barely widened distally, distance between crossveins obviously less (0,6x) than distance from hind crossvein to margin of wing; fore crossvein obviously beyond middle of discal cell (0,80); 5th vein with moderate flexure; anal area somewhat intermediate, rounded but not strongly developed.

Male genitalia: (Fig. 8): Epandrium spherical, posteroventral corni small; surstyli large, strongly tapering to acute apex; cerci fused at base, blunt distally, each with long bristle; ventral epandrial sclerites plate-like, elongate, articulating with the dorsal arms of the hypandrium, which are not united.

Length of body and of wing: 2,5 mm.

Holotype: CÔTE D'IVOIRE: ♂, allotype ♀, and 3 paratypes (1 ♂, 2 ♀), lamto, Jan 22–23, 1971 (D. Lachaise), 'Pied de la berge mineure du Bandama', *Crinum*

natans (Amaryllidaceae); 1 ♀ paratype, same data but 'Berge d'un îlot du Bandama', Jan. 23, 1971. In the Museum National d'Histoire Naturelle, Paris; two paratypes in the U.S. National Museum of Natural History. Also 3 paratypes (1 ♂, 2 ♀), ZAÏRE: 39 km S. of Walikale, 700 m, Dec. 25, 1957 (E. S. Ross & R. E. Leech) in the California Academy of Sciences.

The species is named in honour of the collector.

The female, Budongo Forest, UGANDA, Feb. 7, 1935 (F. W. Edwards), recorded as *Lasiopleura* sp. by Sabrosky (1951) but left unnamed because of the poor condition of the specimen, probably belongs here. A male, Obudu CR, South-east State, NIGERIA, July 21, 1971 (J. T. Medler) [U.S. Nat. Mus. Nat. Hist.] is damaged but appears to belong here also.

***Apotropina nigricornis* sp. n.**

Frons with conspicuous velvet black area on each side of frontal triangle; body brownish above, grey on sides and venter; antenna entirely black or almost so.

Male, female. Head chiefly black; frons with conspicuous velvet black area on each side of frontal triangle; anterior third of frons, face, gena, and palpus yellow, gena silvery tomentose in some lights; antenna black or predominantly so, 3rd segment sometimes narrowly orange below. Thorax black in ground colour, brownish above, grey on entire pleuron and postnotum. Abdominal terga subshining brown, sterna grey. Legs black, grey tomentose, tarsi fulvous. Wing brownish, veins dark brown; knob of halter brownish. Bristles and most hairs black. Female cerci brown.

Head: frontal triangle densely tomentose, with apex at 0,7 times length of frons. Gena moderately broad, 0,76 times breadth of 3rd antennal segment and 0,29 times height of an eye. In profile, long axis of eye diagonal; yellow vibrissa slightly above anterior mouth margin. Antenna moderate in size, 3rd antennal segment broader than long, arista micropubescent. Cephalic bristles differing greatly in development; moderate inner vertical, long ocellar, short and weak postocellar and 3 very short fronto-orbitals, hard to distinguish from frontal hairs; no outer vertical.

Thorax: Subshining, evenly tomentose; only 1 dorsocentral bristle, long and strong; apical scutellar bristles of moderate length and on each side a lateral scutellar rather close to apical but short and weak, no discal hairs; mesopleuron with 2 to 3 black hairs; no sternopleural bristle.

Abdomen: Evenly tomentose, subshining, long haired.

Legs: Hind tibia without tibial organ posterodorsally, and without an obvious anteroventral spur, this probably represented by a short yellow bristle, only half the tibial diameter.

Wing: Second vein long, gently sigmoid, length of 2nd to 4th costal sectors as 39; 19; 10; 3rd vein nearly straight, 4th somewhat concave anteriorly, but the two parallel distally toward costa; discal cell widening distally, small crossvein beyond middle of cell, at almost $\frac{2}{3}$ of cell, distance between crossveins obviously less (0,75) than that between hind crossvein and margin of wing, in spite of the hind

crossvein slightly diagonal, with posterior angle acute; flexure of 5th vein especially strong, with a stub of vein projecting backward into the cell; anal area of wing well developed.

Male genitalia (Figs 6–7): Epandrium knob-like, spherical, without ventral corni, with exceptionally long bristles on sides ventrally, and a clump of black bristles or bristly hairs on ventral median surface on each side; surstyli elongate, nearly as long as epandrium, elbowed, densely haired on both inner and outer surfaces; cerci fused as a mesolobe; ventral epandrial sclerites present as 2 rod-shaped sclerites that articulate with the fused arms of the hypandrium.

Length of body and of wing: 3 to 4 mm.

Holotype: MALAGASY REPUBLIC: ♂, allotype ♀, 1 ♀ paratype, Novana-Antongil, 6 m, dct Maroantsetra, 'Madagascar Est', March 20–25, 1958 (B. Stuckenberg); 1 ♂ paratype, same data but Ambodivoangy, 20 m, March 16–20, 1958. Type and allotype in the Museum National d'Histoire Naturelle, Paris; paratypes in Natal Museum (NM-2551).

In the few specimens available, the 3rd antennal segment is narrowly fulvous below in the two males and entirely black in the two females. Judging from my experience with other chloropids, this may be a consistent secondary sex characteristic.

The specific name is an adjective referring to the black antenna.

***Apotropina sigalopleura* sp. n.**

Black, mesonotum brownish tomentose; frontal triangle, and pleuron chiefly, polished black.

Female: Predominantly black; anterior margin of frons narrowly reddish yellow, face and gena yellow, the latter silvery tomentose, palpus fulvous; antenna fulvous except for dorsal third of 3rd antennal segment; legs with yellow coxae, trochanters, proximal $\frac{3}{4}$ of all femora, and mid and hind tibiae and tarsi, latter distally browned. Wing veins brown, membrane only slightly tinted; halter knob black brown. Cerci brown.

Head: Frontal triangle large, polished black, apex extending nearly to anterior margin of frons, ocellar tubercle tomentose. In profile, frons strongly sloping, long axis of eye diagonal and nearly paralleling slope of frons; gena very narrow, $\frac{1}{2}$ height of eye, with a row of fine black hairs along lower margin. Third antennal segment reniform, broader than long (1.7x); arista missing. Outer vertical bristles present but short; postocellars very short; foremost pair of interfrontals well developed.

Thorax: Mesoscutum subshining, thinly brownish tomentose; pleuron chiefly polished black except for propleuron, narrow band dorsally on mesopleuron, and posterior slope of pleuron; 3 pairs of strong dorsocentral bristles and a moderately strong presutural intra-alar bristle on each side. Scutellum with long apical scutellar bristles, well separated at base, and a short slender lateral scutellar on each side midway between an apical bristle and base of scutellum; no discal scutellar hairs.

Abdomen: Subshining dorsally, polished on sides, moderately long haired.

Legs: Hind tibia possibly with narrow and indistinct tibial organ posterodorsally; no anteroventral spur.

Wings: Second vein relatively short, gently concave anteriorly, length of 2nd to 4th costal sectors as 43:47:18; 3rd vein slightly concave anteriorly and 4th vein nearly straight, thus the two diverging slightly toward apex of wing; discal cell nearly parallel-sided, relatively short, distance between crossveins little over one-half (0,56) that from hind crossvein to wing margin; fore crossvein well beyond middle of discal cell (0,72); 5th vein with weak flexure; anal area of wing not developed, broadly rounded.

Length of body and of wing: 2,5 mm.

Holotype: MOZAMBIQUE: ♀, Luabo, Lower Zambezi River, August 1957 (P. J. Usher), Natal Museum (NM-2552); 1♀ paratype, NIGERIA: Ile-Ife, Western State, Jan. 7, 1970 (J. T. Medler), in the U.S. National Museum of Natural History.

The holotype is lacking the 3rd antennal segments, but is in generally better condition than the paratype. Though the two localities are far apart, the agreement in characteristics that differentiate the species from all the other species leads me to consider that the specimens are conspecific.

The name is a noun in apposition from the Greek meaning shining side.

***Apotropina stuckenbergi* sp. n.**

Frons with conspicuous velvet black areas on each side of densely grey tomentose frontal triangle; antenna chiefly fulvous; thorax grey dorsally with faint suggestion of narrow brownish stripes.

Male, female. Frontal triangle and occiput immediately behind it densely grey tomentose, with conspicuous velvet black area on each side of apex of triangle and broadly behind each eye; frons with short, T-shaped fulvous area anteriorly, across anterior margin of frons and back to apex of triangle; face, gena, 3rd antennal segment chiefly, and palpus yellow to fulvous, 3rd antennal segment infuscated above; arista whitish yellow with black-brown base; median plate of clypeus chiefly polished black. Thorax black in ground colour, densely tomentose, mesoscutum dark grey with suggestion of narrow brownish stripes; pleuron bright grey. Abdomen greyish brown with grey venter. Legs light coloured, with coxae, trochanters, proximal $\frac{1}{4}$ to $\frac{1}{2}$ of femora, proximal $\frac{1}{3}$ of tibiae, and proximal $3\frac{1}{2}$ tarsomeres yellow, remainder blackish, heavily overlain with bright grey tomentum except for the black-brown distal tarsomeres. Wing veins and membrane brownish. Cerci of female black.

Head: Frontal triangle densely tomentose, with apex at about $\frac{2}{3}$ length of frons. In profile, long axis of eye strongly diagonal; gena moderately broad, $\frac{3}{4}$ breadth of 3rd antennal segment and 0,26 times height of an eye, with irregular row of pale hairs just above lower margin. Third antennal segment appearing subquadrate, barely broader than long; arista micropubescent. Only inner vertical and ocellar bristles strong, but not as long as usual, no outer vertical, postocellars and 3 fronto-orbitals short, no longer than frontal hairs; foremost pair of interfrontals not developed, barely longer than frontal hairs.

Thorax: Mesoscutum with one pair of dorsocentral bristles; scutellum with strong, erect and cruciate apical scutellar bristles, and anterior to each a short and weak lateral scutellar; disk of scutellum devoid of hairs; mesopleuron with 1 to 5 scattered short black hairs; no sternopleural bristle.

Abdomen: Short haired.

Legs: Hind tibia without tibial organ anterodorsally, and without anteroventral spur, latter probably represented by a short black bristle only half diameter of tibia.

Wing: Second vein long, gently sigmoid, 2nd to 4th costal sectors as 31 : 16 : 8; 3rd and 4th veins straight and approximately parallel up to apex of wing; discal cell approximately parallel-sided, not widened distally, distance between crossveins slightly longer (1,18x) than from hind crossvein to margin of wing; fore crossvein a little beyond middle of discal cell (at 0,61); flexure of 5th vein especially strong, with a stub of vein projecting backward into cell; anal area well developed.

Male genitalia (Figs 9–10): Epandrium large, knob-like, spherical, on each side a broad ventral cornus crowned at apex with short, stout, apically rounded spines; surstyli elongate, elbowed; cerci fused as a mesolobe; hypandrium small, the arms fused dorsally; ventral epandrial sclerites elongate, plate-like.

Length of body and wing: 2,5–2,75 mm.

Holotype: MALAGASY REPUBLIC: ♂, allotype ♀ and 11 paratypes (2 ♂ 9 ♀), Ranohira, 860 m, 'Madagascar Ouest', Jan. 26 to Feb. 4, 1958 (B. Stuckenberg); 2 ♂ 4 ♀ paratypes; MALAGASY REPUBLIC: Sambirano, Lokobe Nossi-Bé, 6 m, Nov. 9–23, 1957 (B. Stuckenberg). Type and allotype in the Museum National d'Histoire Naturelle, Paris; three paratypes in the U.S. National Museum of Natural History, the remaining paratypes in the Natal Museum (NM-2553).

The species is named in honour of the collector, Brian Stuckenberg, who has provided me with many interesting specimens, all in excellent condition.

***Apotropina tsitsikama* sp. n.**

Black, thorax predominantly brownish tomentose, frontal triangle shining but sparsely tomentose.

Female. Predominantly black or blackish brown; frons fulvous on anterior fourth, back to apex of frontal triangle; face, gena, and palpus yellow; ventral $\frac{2}{3}$ of 3rd antennal segment fulvous; propleuron yellowish brown; legs chiefly yellow, including coxae, trochanters, femora, and mid and hind tibiae and tarsi in part; veins brown, wing membrane slightly brownish; halter yellow.

Head: Frontal triangle subshining but sparsely brownish tomentose, apex much before anterior margin of frons, triangle $\frac{2}{3}$ length of frons. In profile, frons sloping, long axis of eye slightly diagonal. Gena 0,28 times breadth of the broad 3rd antennal segment and 0,16 times height of an eye, with a row of 5 or 6 long black hairs along midline. Third antennal segment unusually large, extended dorsally, reniform, 1,6 times as broad as long; arista long pubescent, with thickened base. Cephalic bristles long and well developed, ocellars especially long; foremost pair of interfrontal hairs stronger than others, cruciate at tips.

Thorax: Mesoscutum subshining, thinly tomentose; thoracic bristles long and distinct, including 2 strong and 2 weak pairs of dorsocentral bristles and a strong presutural intra-alar on each side. Scutellum with long and semi-erect apical scutellar bristles and midway on each side a well-developed lateral scutellar subequal to a posterior dorsocentral; mesad of each lateral scutellar a long fine discal hair. Pleuron subshining, predominantly thinly brownish tomentose, only propleuron in part, an oval anteroventral area on mesopleuron, and lower part of sternopleuron polished; weak sternopleural bristle present.

Abdomen: Subshining, sparsely tomentose, long haired.

Legs: Hind tibia posterodorsally with short, narrow tibial organ, anteroventral spur represented by a short yellow bristle, half diameter of tibia.

Wing: second vein relatively short, gently concave anteriorly, length of 2nd to 4th costal sectors as 26:25:10; 3rd and 4th veins each straight but diverging slightly from base to apex; discal cell long, widening slightly toward hind crossvein, distance between crossveins slightly greater (1,15x) than from hind crossvein to margin of wing; fore crossvein almost opposite middle of discal cell (0,56); 5th vein with moderately strong flexure; anal area of wing not well developed, gently rounded.

Length of body and of wing: 2,5 mm.

Holotype: SOUTH AFRICA: ♀, *Eastern Cape Province*: Storms River Pass, Tsitsikama Range, indigenous forest, 12–13 Oct. 1959 (B. & P. Stuckenberg). Natal Museum (NM-2554.)

The specific name is a noun in apposition, after the Tsitsikama Range.

Apotropina vittata (Sabrosky), **comb. n.**

Lasiopleura vittata Sabrosky, 1959: 418 (Basutoland–Lesotho, type, also Cape Province, Natal, Southern Rhodesia–Zimbabwe).

Oscinis ornatifrons Meijere *sensu* Lamb, 1918: 394 (Natal, with question on the identification).

De Meijere's species, renamed *meijerei* Sabrosky because of primary homonymy with *Oscinis ornatifrons* Loew, is an *Apotropina*, so Lamb was close in his queried identification. One of the original specimens from Durban, Natal, was kindly lent to me from the Cambridge University Collection some years ago by John Smart, and it proved to be the species I had described as *L. vittata*. Since then, I have seen specimens from Lesotho (Roma Mission, Maseru district, Jan. 4–13, 1963, B. & P. Stuckenberg, one labelled 'Upper cave'), east Cape Province (Lundean's Neck, Barkly East district, Jan. 18, 1963, B & P. Stuckenberg) [both Natal Museum], Cape Province (22 mi. N. Nelspoort, March 3, 1968, Paul Spangler [U.S. Nat. Mus. Nat. Hist.], Madagascar (Tananarive, July 14, 1958, F. Keiser) [Naturhist. Mus. Basel], and numerous specimens from Zaïre [Mus. Roy. Afr. Centr., Tervuren, Belgium].

Male genitalia (Figs 4–5): Epandrium slightly conical, relatively large and knob-like, with well-developed posteroventral corni; surstyli relatively narrow, tapering, ending acutely; cerci short, fused at base; hypandrium especially small, hypandrial arms narrowly fused on midline dorsally; ventral epandrial sclerites as 2 long rods articulating with hypandrium.

Apotropina, sp.

One female, 'Salisbury, S. Africa' [Zimbabwe] (F. L. Snow), November 1900, 5050 ft. [Univ. Kansas Colln.], clearly represents an undescribed species distinct from the others now known (cf. key), but it is in poor condition and is left unnamed.

REFERENCES

- ANDERSSON, H. 1977. Taxonomic and phylogenetic studies on Chloropidae (Diptera), with special reference to Old World genera. *Entomol. Scand., Suppl.* **8**: 200 pp., 119 figs.
- BECKER, T. 1910. Chloropidae. Eine monographische Studie. I. Teil. *Archiv. zool., Bpest* **1**: 23–174.
- HENDEL, F. 1907. Nomina nova für mehrere Gattungen der acalyptraten Musciden. *Wien. ent. Ztg.* **26**: 98.
- LAMB, C. G. 1918. Notes on exotic Chloropidae. Part II. Oscininae. *Ann. Mag. nat. Hist.* (9) **1**: 329–348, 385–399, 34 figs.
- 1937. New species of Chloropidae. *Ann. Mag. nat. Hist.* (10) **20**: 421–432, 7 figs.
- SABROSKY, C. W. 1951. Chloropidae. *Ruwenzori Expedition 1934–5* [British Museum (Nat. Hist.)] **2** (7): 711–828, 21 figs.
- 1959. Diptera (Brachycera): Chloropidae. *South African Animal Life* [Lund University] **6**: 413–424.
- 1980a. Unexpected synonymy in Chloropidae, from the family Ephydriidae (Diptera). *Austral. ent. Mag.* **6**: 101–102.
- 1980b. Family Chloropidae. pp. 695–712, in Crosskey, R. W. (ed.), *Catalogue of the Diptera of the Afrotropical Region*. London, British Museum (Nat. Hist.), 1437 pp.
- SCHINER, I. R. 1868. Diptera [Art. 1], 388 pp., 4 pls. In [Wüllerstorff-Urbair, B. von, In charge], *Reise der österreichischen Fregatte Novara. Zool.*, vol. 2, Abt. 1, [Sect.] B.

Date received: 28 October 1981